

## **Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims.

1. (Previously Presented) An isolated antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:
  - (a) a protein consisting of amino acid residues -26 to 203 of SEQ ID NO:2;
  - (b) a protein consisting of amino acid residues 1 to 203 of SEQ ID NO:2;
  - (c) a protein consisting of amino acid residues 1 to 168 of SEQ ID NO:2;
  - (d) a protein consisting of a portion of SEQ ID NO:2, wherein said portion comprises at least 30 contiguous amino acid residues of SEQ ID NO:2; and
  - (e) a protein consisting of a portion of SEQ ID NO:2, wherein said portion comprises at least 50 contiguous amino acid residues of SEQ ID NO:2.
2. (Previously Presented) The antibody or fragment thereof of claim 1 that specifically binds protein (a).
3. (Previously Presented) The antibody or fragment thereof of claim 1 that specifically binds protein (b).
4. (Previously Presented) The antibody or fragment thereof of claim 1 that specifically binds protein (c).
5. (Previously Presented) The antibody or fragment thereof of claim 1 that specifically binds protein (d).
6. (Previously Presented) The antibody or fragment thereof of claim 1 that specifically binds protein (e).
7. (Previously Presented) The antibody or fragment thereof of claim 2 that specifically binds protein (b).

8. (Previously Presented) The antibody or fragment thereof of claim 3 which is a human antibody.
9. (Previously Presented) The antibody or fragment thereof of claim 3 which is a polyclonal antibody.
10. (Previously Presented) The antibody or fragment thereof of claim 3 which is selected from the group consisting of:
  - (a) a chimeric antibody;
  - (b) a humanized antibody; and
  - (c) a Fab fragment.
11. (Previously Presented) The antibody or fragment thereof of claim 3 which is labeled.
12. (Previously Presented) The antibody or fragment thereof of claim 11 wherein the label is selected from the group consisting of:
  - (a) an enzyme;
  - (b) a fluorescent label;
  - (c) a chemiluminescent label; and
  - (d) a toxin label.
13. (Previously Presented) The antibody or fragment thereof of claim 3 wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.
14. (Previously Presented) The antibody or fragment thereof of claim 3 wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.
15. (Previously Presented) An isolated cell that produces the antibody or fragment thereof of claim 3.
16. (Previously Presented) A hybridoma that produces the antibody or fragment thereof of claim 3.

17. (Withdrawn) A method of detecting T1R-like ligand II protein in a biological sample comprising:
  - (a) contacting the biological sample with the antibody or fragment thereof of claim 3; and
  - (b) detecting the T1R-like ligand II protein in the biological sample.
18. (Withdrawn) The method of claim 17 wherein the antibody or fragment thereof is a polyclonal antibody.
19. (Previously Presented) An isolated antibody or fragment thereof obtained from an animal that has been immunized with a protein comprising an amino acid sequence selected from the group consisting of:
  - (a) the amino acid sequence of amino acid residues -26 to 203 of SEQ ID NO:2;
  - (b) the amino acid sequence of amino acid residues 1 to 203 of SEQ ID NO:2;
  - (c) the amino acid sequence of amino acid residues 1 to 168 of SEQ ID NO:2;
  - (d) the amino acid sequence of at least 30 contiguous amino acid residues of SEQ ID NO:2; and
  - (e) the amino acid sequence of at least 50 contiguous amino acid residues of SEQ ID NO:2;wherein said antibody or fragment thereof specifically binds to said amino acid sequence.
20. (Previously Presented) The antibody or fragment thereof of claim 19 obtained from an animal immunized with protein (a).
21. (Previously Presented) The antibody or fragment thereof of claim 19 obtained from an animal immunized with protein (b).
22. (Previously Presented) The antibody or fragment thereof of claim 19 obtained from an animal immunized with protein (c).

23. (Previously Presented) The antibody or fragment thereof of claim 19 obtained from an animal immunized with protein (d).
24. (Previously Presented) The antibody or fragment thereof of claim 19 obtained from an animal immunized with protein (e).
25. (Previously Presented) The antibody or fragment thereof of claim 19 which is a monoclonal antibody.
26. (Previously Presented) The antibody or fragment thereof of claim 19 which is selected from the group consisting of:
  - (a) a chimeric antibody;
  - (b) a polyclonal antibody;
  - (c) a humanized antibody; and
  - (d) a Fab fragment.
27. (Previously Presented) An isolated monoclonal antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:
  - (a) a protein consisting of amino acid residues -26 to 203 of SEQ ID NO:2;
  - (b) a protein consisting of amino acid residues 1 to 203 of SEQ ID NO:2;
  - (c) a protein consisting of amino acid residues 1 to 168 of SEQ ID NO:2;
  - (d) a protein consisting of a portion of SEQ ID NO:2, wherein said portion comprises at least 30 contiguous amino acid residues of SEQ ID NO:2; and
  - (e) a protein consisting of a portion of SEQ ID NO:2, wherein said portion comprises at least 50 contiguous amino acid residues of SEQ ID NO:2.
28. (Previously Presented) The antibody or fragment thereof of claim 27 that specifically binds protein (a).
29. (Previously Presented) The antibody or fragment thereof of claim 27 that specifically binds protein (b).

30. (Previously Presented) The antibody or fragment thereof of claim 27 that specifically binds protein (c).
31. (Previously Presented) The antibody or fragment thereof of claim 27 that specifically binds protein (d).
32. (Previously Presented) The antibody or fragment thereof of claim 27 that specifically binds protein (e).
33. (Previously Presented) The antibody or fragment thereof of claim 28 that specifically binds protein (b).
34. (Previously Presented) The antibody or fragment thereof of claim 29 which is a human antibody.
35. (Previously Presented) The antibody or fragment thereof of claim 29 which is selected from the group consisting of:
  - (a) a chimeric antibody;
  - (b) a humanized antibody; and
  - (c) a Fab fragment.
36. (Previously Presented) The antibody or fragment thereof of claim 29 which is labeled.
37. (Previously Presented) The antibody or fragment thereof of claim 36 wherein the label is selected from the group consisting of:
  - (a) an enzyme;
  - (b) a fluorescent label;
  - (c) a luminescent label; and
  - (d) a bioluminescent label.

38. (Previously Presented) The antibody or fragment thereof of claim 29 wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.
39. (Previously Presented) The antibody or fragment thereof of claim 29 wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.
40. (Previously Presented) An isolated cell that produces the antibody or fragment thereof of claim 29.
41. (Previously Presented) A hybridoma that produces the antibody or fragment thereof of claim 29.
42. (Withdrawn) A method of detecting T1R-like ligand II protein in a biological sample comprising:
  - (a) contacting the biological sample with the antibody or fragment thereof of claim 29; and
  - (b) detecting the T1R-like ligand II protein in the biological sample.
43. (Previously Presented) An isolated antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:
  - (a) a protein consisting of the full-length polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655;
  - (b) a protein consisting of the mature form of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655;
  - (c) a protein consisting of the extracellular domain of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655;
  - (d) a protein consisting of a portion of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655, wherein said portion comprises at least 30 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655; and

- (e) a protein consisting of a portion of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655, wherein said portion comprises at least 50 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655.
44. (Previously Presented) The antibody or fragment thereof of claim 43 that specifically binds protein (a).
45. (Previously Presented) The antibody or fragment thereof of claim 43 that specifically binds protein (b).
46. (Previously Presented) The antibody or fragment thereof of claim 43 that specifically binds protein (c).
47. (Previously Presented) The antibody or fragment thereof of claim 43 that specifically binds protein (d).
48. (Previously Presented) The antibody or fragment thereof of claim 43 that specifically binds protein (e).
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49. (Previously Presented) The antibody or fragment thereof of claim 44 that specifically binds protein (b).
50. (Previously Presented) The antibody or fragment thereof of claim 45 which is a human antibody.
51. (Previously Presented) The antibody or fragment thereof of claim 45 which is a polyclonal antibody.
52. (Previously Presented) The antibody or fragment thereof of claim 45 which is selected from the group consisting of:  
(a) a chimeric antibody;

- (b) a humanized antibody; and
  - (c) a Fab fragment.
53. (Previously Presented) The antibody or fragment thereof of claim 45 which is labeled.
54. (Previously Presented) The antibody or fragment thereof of claim 53 wherein the label is selected from the group consisting of:
- (a) an enzyme;
  - (b) a fluorescent label;
  - (c) a chemiluminescent label; and
  - (d) a toxin label.
55. (Previously Presented) The antibody or fragment thereof of claim 45 wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.
56. (Previously Presented) The antibody or fragment thereof of claim 45 wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.
57. (Previously Presented) An isolated cell that produces the antibody or fragment thereof of claim 45.
58. (Previously Presented) A hybridoma that produces the antibody or fragment thereof of claim 45.
59. (Withdrawn) A method of detecting T1R-like ligand II protein in a biological sample comprising:
  - (a) contacting the biological sample with the antibody or fragment thereof of claim 45; and
  - (b) detecting the T1R-like ligand II protein in the biological sample.

60. (Withdrawn) The method of claim 59 wherein the antibody or fragment thereof is a polyclonal antibody.
61. (Previously Presented) An isolated antibody or fragment thereof obtained from an animal that has been immunized with a protein comprising an amino acid sequence selected from the group consisting of:
- (a) the amino acid sequence of the full-length polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655;
  - (b) the amino acid sequence of the mature form of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655;
  - (c) the amino acid sequence of the extracellular domain of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655;
  - (d) the amino acid sequence of at least 30 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655; and
  - (e) the amino acid sequence of at least 50 contiguous amino acid residues the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655; wherein said antibody or fragment thereof specifically binds to said amino acid sequence.
62. (Previously Presented) The antibody or fragment thereof of claim 61 obtained from an animal immunized with protein (a).
63. (Previously Presented) The antibody or fragment thereof of claim 61 obtained from an animal immunized with protein (b).
64. (Previously Presented) The antibody or fragment thereof of claim 61 obtained from an animal immunized with protein (c).
65. (Previously Presented) The antibody or fragment thereof of claim 61 obtained from an animal immunized with protein (d).

66. (Previously Presented) The antibody or fragment thereof of claim 61 obtained from an animal immunized with protein (e).
67. (Previously Presented) The antibody or fragment thereof of claim 61 which is a monoclonal antibody.
68. (Previously Presented) The antibody or fragment thereof of claim 61 which is selected from the group consisting of:
  - (a) a chimeric antibody;
  - (b) a polyclonal antibody;
  - (c) a humanized antibody; and
  - (d) a Fab fragment.
69. (Previously Presented) An isolated monoclonal antibody or fragment thereof that specifically binds to a protein selected from the group consisting of:
  - (a) a protein consisting of the full-length polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655;
  - (b) a protein consisting of the mature form of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655;
  - (c) a protein consisting of the extracellular soluble domain of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655;
  - (d) a protein consisting of a portion of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655, wherein said portion comprises at least 30 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655; and
  - (e) a protein consisting of a portion of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655, wherein said portion comprises at least 50 contiguous amino acid residues of the polypeptide encoded by the cDNA contained in ATCC Deposit Number 97655.
70. (Previously Presented) The antibody or fragment thereof of claim 69 that specifically binds protein (a).

71. (Previously Presented) The antibody or fragment thereof of claim 69 that specifically binds protein (b).
72. (Previously Presented) The antibody or fragment thereof of claim 69 that specifically binds protein (c).
73. (Previously Presented) The antibody or fragment thereof of claim 69 that specifically binds protein (d).
74. (Previously Presented) The antibody or fragment thereof of claim 69 that specifically binds protein (e).
75. (Previously Presented) The antibody or fragment thereof of claim 70 that specifically binds protein (b).
76. (Previously Presented) The antibody or fragment thereof of claim 71 which is a human antibody.
77. (Previously Presented) The antibody or fragment thereof of claim 71 which is selected from the group consisting of:
  - (a) a chimeric antibody;
  - (b) a humanized antibody; and
  - (c) a Fab fragment.
78. (Previously Presented) The antibody or fragment thereof of claim 71 which is labeled.
79. (Previously Presented) The antibody or fragment thereof of claim 78 wherein the label is selected from the group consisting of:
  - (a) an enzyme;
  - (b) a fluorescent label;

- (c) a chemiluminescent label; and
  - (d) a toxin label.
80. (Previously Presented) The antibody or fragment thereof of claim 71 wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.
81. (Previously Presented) The antibody or fragment thereof of claim 71 wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.
82. (Previously Presented) An isolated cell that produces the antibody or fragment thereof of claim 71.
83. (Previously Presented) A hybridoma that produces the antibody or fragment thereof of claim 71.
84. (Withdrawn) A method of detecting T1R-like ligand II protein in a biological sample comprising:
  - (a) contacting the biological sample with the antibody or fragment thereof of claim 71; and
  - (b) detecting the T1R-like ligand II protein in the biological sample.
85. (Currently Amended) An isolated antibody or fragment thereof that specifically binds a T1R-like ligand II protein expressed on the surface of a cell, wherein said cell comprising T1R-like ligand II protein is encoded by a polynucleotide encoding amino acids 1 to 203 of SEQ ID NO:2 operably associated with a regulatory sequence that controls the expression of said polynucleotide.
86. (Previously Presented) The antibody or fragment thereof of claim 85 which is a monoclonal antibody.
87. (Previously Presented) The antibody or fragment thereof of claim 85 which is a human antibody.

88. (Previously Presented) The antibody or fragment thereof of claim 85 which is selected from the group consisting of:
- (a) a chimeric antibody;
  - (b) a polyclonal antibody;
  - (c) a humanized antibody; and
  - (d) a Fab fragment.
89. (Previously Presented) The antibody or fragment thereof of claim 85 wherein said antibody or fragment thereof specifically binds to said protein in a Western blot.
90. (Previously Presented) The antibody or fragment thereof of claim 85 wherein said antibody or fragment thereof specifically binds to said protein in an ELISA.